

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

SEP 8 1992

P.R. Docket No. 92-151

No. of Copies rec'd.
DATA CODE

September 8, 1992

Motorola Inc. wishes to express support for the proposed modification of §94.17(a)(1) of the Rules to permit Federal Government agencies to be served by Part 94 licensees operating 18 GHz low power digital terminal system ("DTS") systems.

Private fixed licensees, including those with low power DTS authorizations, may offer service on a shared or private carrier basis under §94.17 of the Rules. However, this rule section currently limits shared use and private carrier service offerings on this spectrum to those entities eligible for licensing under Part 94. Federal Government users do not meet this eligibility requirement and are therefore prohibited from being served by Part 94 licensees.

BENEFITS OF 18 GHZ WIRELESS NETWORKS TO FEDERAL AGENCIES

Motorola has developed and markets very spectrally efficient 18 GHz low power wireless in-building networks that connect computing devices in an office, manufacturing, or industrial complex. This product, called "ALTAIR", provides untethered flexibility and can overcome the high costs, delays, safety concerns and inconvenience encountered in installing, expanding, or changing hard-wired local area networks. Many buildings prevalent in the government sector are more than 30 years old, with designs and construction techniques that do not readily accommodate complex communications wiring. As stated in Motorola's Petition for Rulemaking (RM-7839), reliable, cost effective wireless LAN systems operating at 18 GHz can significantly improve efficiency and productivity in such an environment.

In addition to being an 18 GHz equipment supplier, Motorola is also a license holder in this band, offering ALTAIR service in most major metropolitan areas. ALTAIR's low power level, antenna design, and 18 GHz frequency operation allow substantial frequency reuse throughout the 17.5 mile radius service area covered by each license. Therefore, under the shared use provisions of §94.17 of the rules, Motorola makes its licensed channels available to eligible users. ALTAIR's advanced technology, coupled with Motorola's 18 GHz frequency management operation, allows significant spectrum efficiency while maintaining high quality, reliable service for the users.

From a spectrum management perspective, the limited coverage area and the number of potential users per wireless LAN support a single licensee serving multiple entities on a shared/private carrier basis. Doing so allows much more efficient use of the spectrum and obviates the substantial administrative burden that would be required for the Commission or the National Telecommunications and Information Administration (NTIA) to provide separately licensed and protected spectrum for such localized service areas.

Motorola conducted extensive market research to determine communications needs for the 1990's, and specifically to define the requirements for wireless in-building networks. The results of the study were provided in Motorola's Petition for Rulemaking (RM-7839) in this proceeding. The communications needs and alternative solutions are just as critical for federal agencies as they are for non-federal users. In response to demonstrated demand from federal agencies for 18 GHz DTS service, Motorola has requested and received waivers on a case-by-case basis to provide service to federal government entities on a private carrier basis. There is significant interest, as Motorola continues to receive requests for briefings and system demonstrations from federal agencies. The need exists for this service, the product exists, and in most major metropolitan areas, the frequencies have already been authorized. Comparable spectrum is not available through NTIA. It would not be in the public interest to continue to exclude the federal government as eligible users of this highly efficient communications system design.

The benefits ALTAIR offers to Part 94 eligibles are equally applicable to the Federal sector. Further, as a practical matter, private licensees of these low powered systems could equally serve Federal users on a shared basis. Unfortunately, potential Federal users are prohibited by the current rules from availing themselves of these benefits. As stated above, Federal entities are ineligible even as an end user of a Commission licensed low power 18 GHz system on a shared or private carrier basis. Further, because the 18 GHz DTS band is allocated exclusively for non-government use, potential Federal users could not routinely obtain comparable service or their own authorization from NTIA.

Modification of §94.17 as proposed in this Notice will provide Federal entities the same opportunity to improve operational efficiency and safety already afforded

current Part 94 eligibles. As Federal agencies are tax supported, these operational improvements will benefit the public at large. This rule change will further the objectives of both the Commission and the NTIA to cooperate in making more effective use of the limited radio spectrum. Also, Federal agencies will have the opportunity to meet their wireless in-building network needs with equipment already commercially available, thereby avoiding the delay and added cost incurred in obtaining equipment that otherwise would have to be designed exclusively for the Federal market.

REQUESTED RELIEF WOULD NOT ADVERSELY IMPACT PRIVATE USERS

The unique spectral efficiency of low power 18 GHz products allows Federal needs to be met without negatively impacting private users. The low power nature and 18 GHz propagation characteristics allow significant spectrum reuse within the service area of a low power DTS license. Accordingly, a low power licensee could accommodate both non-Federal and Federal users without requiring additional spectrum or reducing the quality of service to either.

The Commission correctly concluded that the system benefits are analogous to high capacity SMR systems "... operating on exclusive assignments and thus are capable of serving a broader range of eligible users without diminishing service quality or availability". (NPRM, para. 6) As noted, under the provisions of §90.603(c), Federal entities are already allowed to be end users of private carrier SMRs in the 800 and 900 MHz mobile bands. Therefore, adequate precedent exists for the relief the Commission proposes.

SUMMARY

Modifying §94.17 of the Commission's rules as requested to allow Federal entities as end users of low power 18 GHz systems on a shared or private carrier basis will make more efficient use of valuable spectrum resources. Federal agencies will benefit from the highly efficient technology and will be able to share channel capacity with low power systems already in place. Furthermore, the low power nature of these systems and the characteristics of the 18 GHz band allow Federal users to be accommodated without negatively impacting private users. Comparable government spectrum is not available to Federal users and it is often more efficient

and cost-effective for these users to utilize "off-the-shelf" commercial equipment. Finally, as the Commission recognizes in its NPRM, adequate precedent exists to support the proposed rule change.

CERTIFICATE OF SERVICE

I, Alice M. de Séve, of Motorola Inc., do hereby certify that on this 8th day of September, 1992 a copy of the foregoing "Comments" was sent to each of the following by first-class mail, postage-prepaid except where service by hand is indicated(*):



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